

Appendix I

Some Memorable Nuggets for Rapid Review*

1. **Acute epiglottitis** in children is caused by *Haemophilus influenzae* type B. It produces a typical “**Thumb sign**” on lateral X-ray film. Ampicillin was considered the drug of choice but now many organisms have become resistant to it and ceftriaxone is preferred.
2. **Acute fulminant fungal sinusitis** is an invasive sinusitis and is commonly seen in diabetics, HIV infected patients and transplant patients receiving chemotherapy for immunosuppression. Therapy in such cases should be urgent, aggressive surgical debridement and amphotericin-B.
3. **Acute laryngotracheobronchitis** or croup is a viral infection caused by parainfluenzae type 1, 2, and sometimes 3. Critical area involved is subglottic larynx producing oedema with stridor and respiratory distress. X-ray (PA view) larynx shows typical “**steeple sign**” but X-rays are avoided as any manipulation may precipitate acute obstruction.
4. **Adenocarcinoma of ethmoid** is mostly seen in those exposed to wood dust.
5. **Adenoid facies**, seen in adenoid hyperplasia, consists of crowded teeth, high-arched palate and underdeveloped pinched nostrils.
6. **Ammonia** is not used to test sense of smell as it stimulates fibres of trigeminal nerve supplying the nose and not the olfactory ones.
7. **Angio-oedema**. Deficiency of C_1 esterase inhibitor causes angio-oedema. Deficiency of this inhibitor causes increased levels of C_1 esterase. This leads to anaphylatoxins which cause capillary permeability and oedema. Deficiency of C_1 esterase inhibitor is an inherited condition.
8. Area of adult tympanic membrane is 90 mm^2 , of which only 55 mm^2 is functional. Area of stapes footplate is 3.2 mm^2 . **Area ratio (or hydraulic ratio)** is 17:1. According to other workers, functional area is 45 mm^2 and area ratio 14:1.
9. **Arnold nerve**. It is auricular branch of jugular ganglion of vagus. It enters the mastoid canaliculus and exits the tympanomastoid suture and supplies skin of posterior part of pinna on medial surface of concha, and posterior wall of external auditory canal and tympanic membrane.
10. **Arnold–Chiari malformation**. Cerebellar tonsils project through the foramen magnum.
11. **Axis of ossicular rotation** passes between anterior process of malleus to short process of incus.
12. **Barrett’s oesophagus**. In the distal oesophagus, squamous epithelium is replaced by columnar epithelium (similar to the one that lines the stomach). It is due to gastroesophageal reflux disease. Carcinoma can develop in 2–5% of patients with Barrett’s oesophagus.
13. **Battle’s sign** is ecchymosis over the mastoid seen in fractures of temporal bone.
14. **Bell’s phenomenon** is seen in lower motor neuron paralysis of CN VII. The eyeball turns up and out when trying to close the eye.
15. **Bezold abscess**. It is an abscess under the mastoid and/or in the digastric triangle when empyema of the mastoid bursts through the medial side of its tip.
16. **Bill’s island**. It is a thin plate of bone left on sigmoid sinus when it is to be retracted during surgery. It should be differentiated from Bill’s bar.
17. **Blue drum** is seen in haemotympanum (due to temporal bone fracture), glue ear, glomus tumour or haemangioma of middle ear.
18. **Boerhaave syndrome**. It is spontaneous rupture of oesophagus due to severe vomiting.
19. **Broyles’ ligament**. Small ligament which connects both the vocal cords at the anterior commissure to the thyroid cartilage.
20. **Bryce’s sign**. Seen in laryngocele. When the swelling is pressed, a gurgling sound is produced.
21. **Carcinoma of nasopharynx** is caused, among other factors, by Epstein–Barr virus. Most common site of origin is fossa of Rosenmüller (pharyngeal recess). Most common histological variety is squamous cell carcinoma and radiotherapy is the treatment of choice.
22. **Carhart’s notch** is seen in otosclerosis. Bone conduction curve shows maximum loss at 2000 Hz.
23. **Caroticotympanic artery** is a branch of internal carotid artery. It anastomoses with branches of external carotid system in the middle ear.
24. **CHARGE syndrome** consists of Coloboma, Heart defects, choanal Atresia, Retarded growth, Genital hypoplasia and Ear anomalies.
25. **Choanal atresia** is more often unilateral, more common in females (2:1), more often on the right side and more often bony than membranous (9:1).
26. **Chordoma** arises from the remnants of notochord. Characteristic appearance on histology is *physaliferous cells*—foamy cells with compressed nuclei.
27. **Chvostek’s sign**. Seen in hypocalcaemia as after total thyroidectomy where parathyroids have also been removed. Tapping over the distribution of facial nerve produces a twitch.
28. **Cleft palate** patients have eustachian tube dysfunction and develop persistent otitis media with effusion and recurrent acute otitis media.

*Note: For details and better understanding, the reader is advised to refer the relevant sections of the book.



29. **Cochlea** is a coiled tube making 2.5 to 2.75 turns. When straightened it measures 32 mm.
30. **Costen syndrome** is abnormality of temporomandibular joint due to defective bite. It is characterized by otalgia, feeling of blocked ear, tinnitus and sometimes vertigo. Pain also radiates to frontal, parietal and occipital region.
31. **Dalrymple's sign**. Seen in Grave disease. It is a clinical sign showing retraction of upper lid with upper scleral show.
32. **Dandy syndrome/oscillopsia** (i.e. difficulty to read boards or hoardings while walking). Seen in bilateral loss of vestibular function, e.g. after systemic streptomycin therapy.
33. **Donaldson's line** passes through horizontal canal and bisects the posterior canal. It is landmark for endolymphatic sac which lies anterior and inferior to it (Figure 79.5).
34. **Dysphagia lusoria** is due to compression of oesophagus by subclavian artery. It occurs when right subclavian artery arises from thoracic aorta and passes in front of or behind the oesophagus.
35. **Eagle syndrome** (*Syn.* syndrome of elongated styloid process). Manifested with discomfort in throat, pain in the ear and upper neck and dysphagia.
36. **Elastic fibrocartilage** is seen in pinna, epiglottis, corniculate, cuneiform cartilages and apices of the arytenoid cartilages. It does not undergo calcification. Hyaline cartilage is seen in thyroid, cricoid and greater part of arytenoid cartilages. It undergoes calcification.
37. **Endolymph** is produced by cells of stria vascularis of the cochlea and dark cells of the vestibular labyrinth. It is absorbed by endolymphatic sac.
38. **Endolymphatic sac**. It is located posterior to mastoid segment of CN VII, inferior to posterior semicircular canal and superior to jugular bulb.
39. **Eustachian tube** is 36 mm long, one-third is bony and two-thirds are cartilaginous. Normally, it remains closed. Opening of the tube is an active process due to contraction of tensor veli palatini muscle while closure is passive due to recoil of the cartilage.
40. **Exostosis of external auditory canal** are multiple and usually associated with cold water swimming while osteoma of external canal is usually single and occurs at suture lines, e.g. tympanomastoid.
41. **External auditory canal** of an adult is 24 mm in length. Outer one-third (8 mm) is cartilaginous and inner two-thirds (16 mm) are bony.
42. **Fluctuating hearing loss**. It is seen in otitis media with effusion, Ménière's disease, perilymph fistula, autoimmune disorder of the inner ear and syphilitic labyrinthitis and malingerer.
43. **Frenzel manoeuvre**. It is used to open the eustachian tube and ventilate the middle ear by contracting muscles of the floor of mouth and pharynx while nose, mouth and glottis are closed. It is a little more difficult to learn than Valsalva manoeuvre.
44. **Frey's syndrome**. There is flushing and sweating of skin of parotid region during eating. It is seen after parotidectomy. Parasympathetic fibres supplying the parotid gland are misdirected after parotidectomy and innervate sweat glands of the parotid area.
- Tympanic neurectomy (section of tympanic branch of CN IX) will interrupt these fibres and give relief.
45. **Fungal sinusitis** is mostly caused by *Aspergillus*.
46. **Galen's anastomosis**. It is anastomosis between superior and recurrent laryngeal nerves.
47. **Gelle's test** compares intensity of bone-conducted tuning fork sound, without and with, raising pressure on the tympanic membrane with Siegel's speculum. Normally, Gelle's test is positive because intensity of hearing decreases when air pressure is raised in external auditory canal. In ossicular fixation or ossicular discontinuity, increased air pressure makes no changes in the sound intensity (Gelle's negative).
48. **Gradenigo syndrome** consists of (i) ear discharge (suppurative otitis media), (ii) diplopia (CN VI paralysis) and (iii) retro-orbital pain (CN V) involvement. It is due to petrositis—a complication of otitis media.
49. **Grisel syndrome**. It is atlanto-axial dislocation. Can follow adenoid surgery or nasopharyngeal infections. Manifests with painful neck and torticollis.
50. **Griesinger's sign** is oedema over the mastoid and is seen in lateral sinus thrombosis. It is due to thrombosis of mastoid emissary vein impeding venous drainage and thus causing oedema over the mastoid.
51. **Gutmann's pressure test**. It is done in puberphonia. Pressing on the thyroid prominence in a backward and downward direction relaxes the overstretched vocal cords and thus low-pitched voice can be produced.
52. **Habenula perforata**. It is the area where branches of cochlear nerve enter the cochlea. Openings may be wide leading to a perilymph gusher in stapes surgery. This condition is associated with enlarged internal acoustic meatus and stapes fixation of congenital origin. It is an X-linked disease and can be diagnosed on CT.
53. **Hennebert's phenomenon**. Dysequilibrium following nose blowing or lifting a heavy object. Seen in perilymph fistula (do not confuse with Hennebert's sign).
54. **Hennebert's sign** is a positive fistula sign in the absence of fistula. Seen in congenital syphilis due to formation of adhesions between stapes footplate and saccule. Also seen in some cases of Ménière's disease.
55. **Hidden areas of the larynx** include infrahyoid epiglottis, anterior commissure, subglottis, ventricle and apex of pyriform fossa.
56. **Horner syndrome** consists of ptosis, miosis (constriction of pupil), anhidrosis and enophthalmos due to paralysis of cervical sympathetics.
57. **Hyrtl's fissure**, also called tympanomeningeal hiatus, it is an embryonic remnant that connects CSF space to middle ear just anterior and inferior to the round window. It runs parallel to cochlear aqueduct. It can be a source of congenital CSF otorrhoea or meningitis from middle ear infections. Normally it gets obliterated.
58. In any case of **unilateral otitis media with effusion** in an adult, rule out nasopharyngeal pathology especially the carcinoma.
59. In **Fitzgerald–Hallpike (bithermal caloric) test**, thermal stimulation occurs in the horizontal semicircular canal. Cold water (30 °C) causes nystagmus to the opposite side while warm water (44 °C) to the same side. Remember COWS (Cold-Opposite-Warm-Same).

60. **Inverted papilloma or Ringertz tumour** arises from the lateral wall of nose. It is characterized by squamous or transitional cell epithelium with fibrovascular stroma. Inward growth of epithelium towards stroma lends the name of inverted papilloma to it. It is associated with squamous cell carcinoma in 10–15% of patients.
61. **Jacobson's nerve** (Syn. tympanic branch of glossopharyngeal nerve). Forms tympanic plexus, supplies mucosa of the middle ear cleft. Its preganglionic parasympathetic fibres leave the middle ear as lesser petrosal nerve and supply the parotid gland. Section of this nerve is sometimes done to treat Frey's syndrome.
62. **Jugular foramen syndrome** is paralysis of CN IX, X and XI. It is seen in carcinoma nasopharynx, glomus jugulare, large acoustic neuroma or thrombophlebitis of jugular bulb.
63. **Kallmann syndrome** is anosmia and congenital hypogonadism.
64. **Kartagener syndrome** consists of recurrent sinusitis, bronchiectasis and situs inversus. Ciliary motility is disturbed. Electron microscope shows absence of dynein side arms in A-tubules of nasal respiratory mucosa.
65. **Korner's septum**, sometimes seen during mastoid surgery, is a bony plate separating superficial *squamous cells* from the deeper *petrosal air cells*. Antrum lies deep to it (see p. 8, 457).
66. **Krause's nodes** are lymph nodes situated in the jugular foramen. Enlargement of these nodes compresses on CN IX, X and XI causing jugular foramen syndrome.
67. Larynx has three important spaces: pre-epiglottic, paraglottic and Reinke's. The first two are important because they are invaded by carcinoma arising in the laryngeal mucosa. **Reinke's space** is often affected by oedema and causes polypoid degeneration of vocal cords.
68. **Lermoyez syndrome** is a variant of Ménière's disease. Patient first gets hearing loss and tinnitus. An attack of vertigo follows and relieves tinnitus and improves hearing.
69. **Lever ratio** between the handle of malleus and the long process of incus is 1.3:1.
70. **Lhermitte's sign**. A rare sign seen after radiation of cervical spine. Electrical current-like sensation is felt in both arms, dorsal spine and both legs on flexing the neck.
71. **Lyre's sign**. It is splaying apart of internal and external carotid arteries on angiogram in cases of carotid body tumour of the neck.
72. **Malleus and incus are derived from the first arch**. Stapes develops from second arch except its footplate and annular ligament which are derived from the otic capsule.
73. **Marcus Gunn pupil**. This is due to interruption of afferent papillary pathway due to retrobulbar neuritis or any other optic nerve disease. When light is put on the diseased side, the pupils of both sides remain dilated but when the light is put on the healthy side it constricts both the pupils. In the latter case pupil on diseased side constricts due to consensual light reflex because the efferent pathway on the diseased side is normal. It is an important sign during endoscopic sinus surgery for any injury to the optic nerve.
74. **Marcus Gunn syndrome**. Opening of mouth causes opening of eyes and closing of mouth causes ptosis. This is due to associated movements following facial paralysis and faulty regeneration of facial nerve fibres.
75. **Mastoid antrum** lies 12–15 mm deep from the surface of suprameatal triangle in an adult. The thickness of the bone overlying the antrum is only 2 mm at birth and then increases at the rate of 1 mm every year.
76. **Mastoid tip does not develop till 2 years**; hence postaural incision to open the mastoid before this age needs to be modified to avoid injury to the facial nerve.
77. **Michel aplasia**. There is total lack of development of inner ear. It can be confused radiologically with labyrinthine ossification and can be distinguished by MRI which may show membranous labyrinth in the latter.
78. **Modiolus** is the central bony axis of cochlea and measures 5 mm in length.
79. Most common **organism responsible for acute bacterial sinusitis** is *Streptococcus pneumoniae* followed by *Haemophilus influenzae*. Anaerobic and mixed infections are seen in sinusitis of dental origin.
80. Most common **organisms in acute otitis media** are *S. pneumoniae*, *H. influenzae* and *Moraxella catarrhalis* in decreasing order.
81. **Most common site for epistaxis** (90%) is Little's area situated on anteroinferior part of nasal septum.
82. **Most common site of involvement in stapedial otosclerosis** is located at the anterior edge of oval window in the area of fissula ante fenestram.
83. **Mouse-nibbled appearance of vocal cords** is caused by tuberculosis.
84. **Mucormycosis** is acute invasive fungal infection involving nose and paranasal sinuses, where fungal hyphae invade blood vessels causing ischaemic necrosis. Commonly involves lateral nasal walls and turbinates and quickly spreads to orbit, palate, face and cranium. Treatment is surgical debridement and amphotericin-B.
85. **Müller's manoeuvre**. Used to find the level and degree of obstruction in sleep-disordered breathing. It is performed while using flexible nasopharyngoscope. First the examiner sees the upper airways at rest and then during the time when patient makes maximal inspiratory effort with nose and mouth closed. Base of tongue, lateral pharyngeal wall and palate are examined for collapsibility and then rated from 0 (minimal collapse) to 4+ (complete collapse).
86. **Multiple juvenile laryngeal papillomatosis** is a benign condition caused by human papilloma virus subtype 6 and 11. Treatment of choice is repeated excision with CO₂ laser. Malignant change is uncommon unless radiation has been used as a mode of treatment.
87. **Muscles of the palate**. All muscles of the palate are supplied by the pharyngeal plexus except tensor veli palatini which is supplied by N to medial pterygoid (CN V).

88. **Muscles of the pharynx.** All muscles of the pharynx are supplied by the pharyngeal plexus except stylopharyngeus which is supplied by CN IX.
89. **Muscles of the tongue.** Both extrinsic and intrinsic muscles of the tongue are supplied by CN XII except palatoglossus which is supplied by the pharyngeal plexus.
90. Nearly 80% of carcinomas involving paranasal sinuses are squamous cell. **Maxillary sinus is the most frequently involved sinus.** Other sites in decreasing order are nasal cavity, ethmoid sinuses, frontal and sphenoid sinuses.
91. **Necrotizing otitis externa**, also called *malignant otitis externa*, is caused by pseudomonas infection in an elderly patient with diabetes.
92. **Nerve of Wrisberg** (syn. nervus intermedius). It is a part of facial nerve and carries sensory and parasympathetic fibres.
93. **Node of Rouviere** is the most superior node of the lateral group of retropharyngeal nodes.
94. **Noise-induced hearing loss** shows a dip at 4000 Hz in air conduction curve of audiogram.
95. **Noninvasive forms of fungal sinusitis** are (i) fungal ball and (ii) fungal allergic sinusitis presenting with polyps. They do not require antifungal treatment.
96. Numbness in the posterosuperior meatal wall (supplied by CN VII) is seen in acoustic neuroma and is called **Hitzelberger sign**.
97. **Ortner's syndrome** is paralysis of recurrent laryngeal nerve and cardiomegaly.
98. **Otic capsule**—Also so-called bony labyrinth ossifies from 14 centres. Ossification starts at 16th week and ends by 20–21st week of gestation.
99. **Paralysis of stapedial muscle** (supplied by CN VII) causes hyperacusis or phonophobia.
100. **Paterson-Brown-Kelly syndrome** (Syn. **Plummer-Vinson syndrome**). Consists of iron-deficiency anaemia, dysphagia (due to oesophageal web), koilonychia and angular cheilitis. It is a risk factor for postcricoid carcinoma.
101. **Pemberton's manoeuvre.** Done to see thoracic inlet obstruction in substernal extension of thyroid mass. Raising the arms above the head causes respiratory discomfort, venous distension of neck veins and suffusion of face.
102. **Pierre-Robin sequence (syndrome).** A triad of micrognathia, glossoptosis and cleft palate.
103. **Posterior cricoarytenoid** is the *only* abductor muscle of the larynx. It is supplied by recurrent laryngeal nerve.
104. **Pouch of Luschka.** During development, notochord is attached to the endoderm in the area of nasopharynx producing an invagination pouch. Persistence of this pouch causes Thornwaldt's cyst which may get infected to form an abscess (See p. 270).
105. **Preoperative open biopsy.** It is not done in an angiofibroma of nasopharynx, glomus tumour of the middle ear, carotid body tumour of the neck and parapharyngeal tumours which appear to be benign.
106. **Prussak's space** lies medial to pars flaccida, lateral to the neck of malleus and above the lateral process of malleus. Anteriorly, posteriorly and superiorly, it is bounded by lateral malleal ligament. Posteriorly, it also has a gap through which the space communicates with epitympanum.
107. **Psammoma bodies.** Found in papillary carcinoma of thyroid gland and in meningiomas.
108. **Rathke's pouch.** A diverticulum of nasopharyngeal mucosa that forms the anterior lobe of pituitary. Its track may persist as craniopharyngeal canal and give rise to craniopharyngioma (See p. 270).
109. **Recruitment** is an abnormal growth in loudness and is seen in cochlear lesions.
110. **Recurrent laryngeal nerve.** Supplies all the muscles of the larynx except cricothyroid which is supplied by the external laryngeal nerve.
111. **Rhinophyma** is due to hypertrophy of sebaceous glands of the nasal tip. It is associated with acne rosacea.
112. **Rhinoscleroma** is caused by a Gram-negative coccobacillus *Klebsiella rhinoscleromatis*. The disease passes through three stages—catarrhal, granulomatous and cicatricial. It causes woody infiltration of the upper lip. Other areas involved are larynx (subglottic region) and trachea leading to airway obstruction. Mikulicz cells and Russell bodies are characteristically seen on histology (See p. 175).
113. **Risk factors associated with laryngeal cancer** are smoking, use of alcohol, gastro-oesophageal reflux, exposure to wood dust, asbestos and volatile chemicals, nitrogen mustard and previous ionizing radiation. Genetic susceptibility also plays a great role.
114. **Risk factors associated with nasal and paranasal sinus malignancy** are wood dust, nickel and chromium plating industries, isopropyl oil, volatile hydrocarbons and smoking.
115. **Russell bodies.** Seen in rhinoscleroma. Plasma cells are seen to contain rounded eosinophilic structures on histopathology. They contain immunoglobulins which are secreted by plasma cells.
116. **Samter's triad** consists of nasal polypi, bronchial asthma and aspirin sensitivity.
117. **Schaumann's bodies.** Seen in sarcoid granuloma.
118. **Schneiderian membrane (mucosa).** It is another name for respiratory mucosa of nose and consists of pseudostratified ciliated columnar cells.
119. **Schwartz sign** is a pink reflex seen through an intact tympanic membrane in the area of the oval window. It indicates active otosclerosis usually during pregnancy.
120. **Sinodural angle**, also called **Citelli's angle**, is situated between the sigmoid sinus and middle fossa dura plate.
121. **Sipple's syndrome.** Consists of medullary carcinoma of thyroid, pheochromocytoma and parathyroid hyperplasia or adenoma.
122. **Sluder's neuralgia.** It is characterized by neuralgic pain in lower half of face with nasal congestion, rhinorrhoea and increased lacrimation. It is due to neuralgia of sphenopalatine ganglion.
123. **Solid angle** is the area where three bony semicircular canals meet.
124. **Structures of ear fully formed by birth** are middle ear, malleus, incus, stapes, labyrinth and the cochlea.
125. **SUNCT syndrome** (Short lasting, Unilateral, Neuralgiform, with Conjunctival injection and Tearing).

- It is a form of cluster headache seen in women who respond to indomethacin.
126. **Tolosa–Hunt syndrome** causes unilateral orbital pain with one or more of CN III, IV and VI palsies which are episodic. There is granulation tissue in cavernous sinus, superior orbital fissure or orbit. It is treated by steroids.
 127. **Tone decay**, also called auditory fatigue, is change in auditory threshold when a continuous tone is presented to the ear. It is seen in acoustic neuroma and other retrocochlear lesions.
 128. **Trautmann's triangle** is bounded by the bony labyrinth anteriorly, sigmoid sinus posteriorly and the dura or superior petrosal sinus superiorly ([Figure 80.2](#)).
 129. **Treatment of choice for antrochoanal polyp** in a child is functional endoscopic sinus surgery (FESS) or intranasal polypectomy. Caldwell–Luc operation is avoided.
 130. **Trotter (or Sinus of Morgagni) syndrome or triad** is seen in nasopharyngeal carcinoma which spreads laterally to involve the sinus of Morgagni involving mandibular nerve. It is characterized by:
 - (a) Conductive hearing loss (due to eustachian tube obstruction).
 - (b) Ipsilateral immobility of soft palate.
 - (c) Neuralgic pain in the distribution of V₃.
 1. Trismus and preauricular fullness may be associated with the above.
 131. **Tullio phenomenon**. Loud sound produces vertigo. It is seen in congenital syphilis or when three functioning windows are present in the ear—oval window, round window and an extra window—fistula of the semicircular canal or fenestration operation in the presence of mobile footplate of stapes.
 132. **Turban epiglottitis** is due to oedema and infiltration of the epiglottis and is caused by laryngeal tuberculosis. **Lupus**—a form of tuberculosis, on the other hand, eats away and destroys the epiglottis.
 133. **Tympanic membrane** develops from all the three germinal layers: ectoderm (outer epithelial layer) mesoderm (middle fibrous layer) and endoderm (inner mucosal layer).
 134. **Ventricle of Morgagni** (Syn. laryngeal ventricle between true and false cords). Differentiate it from the sinus of Morgagni.
 135. **Vertical and anteroposterior dimensions of middle ear** are 15 mm each while transverse dimension is 2 mm at mesotympanum, 6 mm above at the epitympanum and 4 mm below in the hypotympanum. Thus, the middle ear is the narrowest space between the umbo and promontory.
 136. **Vocal nodules** occur at the junction of anterior with middle third of vocal cords as this is the site with the maximum vibratory area during speech.
 137. **Volume of middle ear** varies between 0.5 and 1.0 mL. It is important when giving intratympanic injections, e.g. gentamicin in Ménière's disease and steroids in sudden deafness.
 138. **Vomeronasal organ**. It is a vestigial structure earlier related to smell. It can sometimes be visualized as a pit on the anteroinferior part of nasal septum.
 139. **Wallenberg syndrome (posterior inferior cerebellar artery syndrome)** or lateral medullary syndrome is due to thrombosis of posterior inferior cerebellar artery causing ischaemia of lateral part of medulla. It is characterized by:
 - (a) Vertigo, nausea and vomiting
 - (b) Horner syndrome
 - (c) Dysphagia
 - (d) Dysphonia
 - (e) Ataxia with tendency to fall to the involved side
 - (f) Loss of pain and temperature sensation on same side of face and contralateral side of limbs.
 140. **Woodruff's plexus**. It is a plexus of veins situated inferior to posterior end of inferior turbinate. It is a site of posterior epistaxis in adults.
 141. **Wrisberg's cartilage**. Another name for cuneiform cartilage situated in aryepiglottic fold. It is fibroelastic cartilage and does not undergo calcification.
 142. All the muscles of soft palate are supplied by the cranial part of CN XI except tensor veli palatini which is supplied by V₃.

Page left intentionally blank